

WE CLAIM:

1. A multi-layer thin film coating for use with photochromic lenses, said multi-layer thin film comprising a plurality of dielectric layers selected and arranged so as to reflect an amount less than about 15% of spectral UVA radiation in a range between 315 and 400 nm.
2. The multi-layer thin film coating according to claim 1, wherein the range of spectral UVA radiation is from about 315 to 400 nm.
3. The multi-layer thin film coating according to claim 1, wherein the multi-layer thin film coating reflects less than 6% of spectral UVA radiation.
3. The multi-layer thin film coating according to claim 1, wherein the plurality of dielectric layers comprises SiO₂.
4. The multi-layer thin film coating according to claim 1, wherein the plurality of dielectric layers comprises TiO₂.
5. The multi-layer thin film coating according to claim 1, wherein the plurality of dielectric layers alternate low and high refractive indices.
6. The multi-layer thin film coating according to claim 1, wherein the plurality of dielectric layers comprises ZrO₂.
7. The multi-layer thin film coating according to claim 1, wherein the plurality of dielectric layers comprises twelve layers.
8. The multi-layer thin film coating according to claim 1, wherein the plurality of dielectric layers comprises four layers.

9. The multi-layer thin film coating according to claim 1, wherein the plurality of dielectric layers comprises up to 100 layers.

10. The multi-layer thin film coating according to claim 1, wherein the multi-layer thin film coating has an activation value greater than 40% of the activation value of the photochromic lens.

11. The multi-layer thin film coating according to claim 1, wherein the multi-layer thin film coating has an activation value greater than 90% of the activation value of the photochromic lens.

12. The multi-layer thin film coating according to claim 1, wherein the multi-layer thin film coating has an activation value greater than 97% of the activation value of the photochromic lens.

13. The multi-layer thin film coating according to claim 1, wherein the multi-layer thin film coating has an activation value substantially equal to the activation value of the photochromic lens.

14. The multi-layer thin film coating according to claim 1, wherein the multi-layer thin film coating has an activation value greater than about 25%.